Angiogenesis - Background

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AB **Angiogenesis** is the process by which new capillary blood vessels are formed from preexisting vessels. A number of components of this morphogenetic process, including endothelial cell invasion and capillary lumen formation, are believed to be dependent on tightly controlled proteolytic degradation of the extracellular matrix. The critical importance of an appropriate balance between proteases and protease inhibitors in these processes is suggested by two sets of observations. Firstly, that extracellular matrix invasion and capillary lumen formation are inhibited in the presence of an excess of protease inhibitors. Secondly, that when unchecked by protease inhibitors, excessive proteolysis is incompatible with normal capillary morphogenesis. These results clearly suggest that a precisely regulated proteolytic balance is necessary for normal capillary morphogenesis.